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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/829,474	04/09/2001	Douglas E. Chrzanowski	END919980129US2	8680

7590 11/14/2006
Steven Fischman
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EXAMINER

COLE, ELIZABETH M

ART UNIT	PAPER NUMBER
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1771

DATE MAILED: 11/14/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/829,474

Applicant(s)

CHYZANOWSKI ET AL.

Examiner

Elizabeth M. Cole

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 13 and 14 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 13-14 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. ____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date ____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____.
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: ____.

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1. Claims 13 and 14 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. In claim 13, the specification does not provide support for the limitation that the laminate is "high strength".

2. Claims 13 and 14 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. The term "high strength" in claim 13 is a relative term which renders the claim indefinite. The term "high strength" is not defined by the claim, the specification does not provide a standard for ascertaining the requisite degree, and one of ordinary skill in the art would not be reasonably apprised of the scope of the invention. It is not clear what strength values would be considered high.

3. Claims 13 and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over JP 11-107,112 for the reasons set forth in the previous action. With regard to the limitation that the pad has a tendency to collapse due to detrimental interaction of the wire thickness, copper hardness, pad thickness, processing tool pressure and material construction of the laminate support, since the claims are drawn to the laminate support, not the pad, and since JP '112 teaches a laminate support for use in forming circuit boards, presumably the pads used to form the circuit of JP '112 would also have these properties and tendencies.

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4. Applicant's arguments filed 9/6/06 have been fully considered but they are not persuasive.

5. Applicant argues that JP '112 does not disclose the specific spacing between the strands of the mesh in order to support the pad so as to prevent collapse, that the rejection is just setting forth a problem, rather than a solution. However, JP '112 teaches optimizing the spacing the fibers in the weave in order to form a fabric having the desired strength. The JP '112 reference is not simply drawn to a laminate support alone, but actually teaches optimizing the weave density by making the spacing between the adjacent strands small so as to increase the accuracy and efficiency of circuit boards which employ the fiber glass cloths. Therefore, JP '112 teaches that the weave density is a result effective variable. This teaching would seem to be relevant to prevention of collapse as well as to the control of the expansion and contraction of the fabric during use. JP '112 teaches a relationship between spacing and strength, accuracy and efficiency. It is true that JP '112 does not disclose the exact claimed dimensions and spacings. However, JP '112 does teach that the dimensions and spacings are relevant to accurately and efficiently making circuit boards. Therefore, JP '112 renders the instant claims obvious, since the optimization of a recognized result effective variable is obvious. Since JP '112 teaches that the spacing is a result effective variable it would have been obvious to have optimized the spacing through the process of routine experimentation which resulted in the desired strength, accuracy and efficiency in circuit boards which comprise the woven glass cloths.

6. Applicant argues that the particular dimensions claimed provide an accurate and precise optimization of the type of laminate support for the wire bonded circuit device at a minimum amount of weight and physical displacement. However, no evidence showing a criticality for these values has been presented. Further, Applicant argues that the JP publication does not provide any optimized values which are analogous to those presented and claimed herein, but provides for a general discussion and completely different physical parameters which cannot be utilized in conjunction with the type of structure considered by the present invention. However, the JP reference is drawn to a laminate support for making circuit boards. JP '112 teaches optimizing the dimensions and spacings of the fibers which make up the fiber glass cloth, which are the same physical parameters which are optimized in the instant invention. JP '112 teaches that optimizing these spacings and dimensions results in a laminate support having excellent strength which is relevant to the claimed resistance to deformation. Therefore, the JP '112 reference is relevant to the claimed invention since it relates to the same field of endeavor and since it teaches optimizing the spacing and dimension of the fibers of the weave in order to enhance the strength of the resulting laminate and to make the circuit board making process more accurate and efficient.

7. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not

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mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Elizabeth M. Cole whose telephone number is (571) 272-1475. The examiner may be reached between 6:30 AM and 6:00 PM Monday through Wednesday, and 6:30 AM and 2 PM on Thursday.

Mr. Terrel Morris, the examiner's supervisor, may be reached at (571) 272-1478.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

The fax number for all official faxes is (571) 273-8300.

A handwritten signature in black ink, appearing to read "Elizabeth M. Cole", with a long, sweeping horizontal line extending to the right.

Elizabeth M. Cole
Primary Examiner
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e.m.c